

REMARKS

The above amendments and these remarks are responsive to the Office action dated October 20, 2004. Prior to this amendment, claims 1-15 and 34-51 were pending in the application, and all were rejected in the Office action. By this Amendment, Applicants have amended claims 1, 2, 14, 37, 49, and 51. Applicants respectfully request reconsideration of the application under 37 C.F.R. § 1.111 and allowance of the pending claims.

Claim Objections

The Office action objected to claims 37 and 51 for various informalities. Applicants amended claims 37 and 51 by adding the word “region” after “...recess...” in the respective claims, as suggested by the Examiner. Accordingly, Applicants request withdrawal of the claim objections.

Rejections under 35 U.S.C. § 102

The Office action rejected claims 1, 14, 15, and 49-51 under 35 U.S.C. § 102(a) as being anticipated by PCT-WO 01/49383 to Chung (hereinafter, Chung). Applicants have amended claims 1, 14, and 49 to clarify the differences between the claimed invention and the Chung disclosure. Claim 15 was not amended, as it depends from amended independent claim 14. Claims 50 and 51 were not amended in a substantive way (claim 51 was amended as noted in the previous section) as they depend from amended independent claim 49.

For a claim to be anticipated, “[t]here must be no difference between the claimed invention and the reference disclosure, as viewed by a person of ordinary skill in the field of the invention.” *Scripps Clinic & Research Found. v. Genentech*, 927 F.2d 1565, 1576 (Fed. Cir.

1991). Anticipation is established if every element of a properly construed claim is present in a single prior art reference. *Glaverbel Societe Anonyme v. Northlake Mktg. & Supply, Inc.*, 45 F.3d 1550, 1554 (Fed. Cir. 1995).

Applicants respectfully submit that claim 1 is allowable over Chung because it has been amended to recite a Geneva mechanism having two gears with two distinct forms of interaction between the gears occurring on two distinct planes, which different planes of interaction are not disclosed or suggested by Chung. As seen in Figures 2 and 8 of Applicants' disclosure, and as recited in the amended claim 1, the interaction involving the engaged configuration of the pair of gears defines a first spatial plane, while the interaction involving the at least two non-rotating configurations of the pair of gears defines a second spatial plane. The two defined spatial planes are distinct from one another. In Figure 2, for example, the engaged configuration defines an upper plane while the at least two non-rotating configurations define a lower plane (these relative locations are reversed in Figure 8).

In contrast, Figures 3A and 3B of Chung, cited by the Examiner, portray gear edge-to-gear edge interactions defining a single common plane in both the engaged and non-rotating configurations. In Figure 3B of Chung, for example, gear teeth 65A and teeth 65B are on the same surface, or plane, of output gear 58. Therefore, the interactions they enable with drive gear 56 must also occur on a common plane. Similarly, in Figures 3A and 3B of Chung, the two types of interactions between the two gears in the pair occur on a common plane. As such, these cited figures do not disclose all the elements of Applicants' claim 1 as amended.

Applicants respectfully submit that claim 14 is also allowable over Chung because it now recites a set of twin, substantially overlapping, interengaged rotors, interacting on two distinct planes. As discussed in relation to claim 1, the figures cited by the Examiner (Chung Figures

2A, 2B, 3A, and 3B) do not disclose the engaged interaction and the at least two non-rotating interactions occurring on two distinct spatial planes.

For at least these reasons, Applicants respectfully submit that Chung fails to anticipate claims 1 and 14 and request withdrawal of the rejection under 35 U.S.C. § 102(a). Claim 15 depends from allowable claim 14, and therefore is allowable as well. Applicants request withdrawal of the rejections of claims 1, 14, and 15 under 35 U.S.C. § 102(a).

Applicants respectfully submit that amended claim 49 is now allowable because Chung fails to disclose, teach, or suggest the recited “drive cam structure having an outer surface of a generally inwardly facing curvature and including a cam recess region … having a generally outwardly facing curvature.” As amended, the text of claim 49 clarifies that the cam recess region is a defined region in the drive cam structure. Stated otherwise, the cam recess region is actually part of the drive cam structure. The relationship between the driven cam structure and the cam recess region is illustrated and described at least in connection with Figure 13 of the present application. With reference to Figure 13 and as stated in the specification of the present application, the drive cam structure 244 includes bearing surface 264 and cam recess region 252. The bearing surface of the drive cam structure has a generally inwardly facing curvature, that is, facing towards the center of the gear. In contrast, the cam recess region has a generally outwardly facing curvature, that is, facing away from the center of the gear.

The Office action stated that Chung disclosed a similar configuration in Chung’s Fig. 3B, equating the claimed drive cam structure to Chung’s arcuate upstanding wall and the claimed cam recess region to the “area recessed from the outer edge of the drive gear 56 that intersects with the defined drive cam structure.” Applicants respectfully submit that Chung fails to disclose a cam recess region that is part of the drive cam structure. In Chung, the spacing

between the arcuate upstanding wall and the outer edge of the drive gear is not part of the defined drive cam structure, it is simply a part of the drive gear. For this reason, Applicants respectfully submit that Chung fails to anticipate claim 49.

Additionally, Applicants submit that Chung fails to disclose, teach, or suggest a drive cam structure having a generally inwardly facing curvature and including a cam recess region that interrupts the inwardly facing curvature with a region of generally outwardly facing curvature. This relationship between the drive cam structure and the cam recess region provides an alignment feature to the claimed Geneva mechanism to guide the cam lob portion of the driven gear into proper alignment with the cam recess region and aligns the drive teeth with the driven teeth. Applicants submit that Chung's arcuate upstanding wall fails to disclose a drive cam structure including a cam recess region as recited in amended claim 49. In light of the claim amendment and Chung's failure to disclose a cam recess region in a drive cam structure, Applicants respectfully submit that the rejection of claim 49 under 35 U.S.C. § 102(a) should be withdrawn. Claims 50 and 51 depend from allowable claim 49, and therefore are allowable as well.

Other Claim Amendments

Claim 2 was not specifically rejected by the Examiner, suggesting that it adds sufficient limitations to claim 1 that it would be allowable if re-written in independent form. Amended claim 2 now includes all the limitations of original claims 1, and Applicants respectfully request allowance of claim 2 and claims 3-13 that depend therefrom.

The amendments to claim 2 also include language clarifying the relationship between the recited drive cam structure and the recited cam recess region that is part of the drive cam

structure. Applicants have not made this amendment in response to a rejection or for any other reason related to the patentability of claim 2. Accordingly, Applicants respectfully submit that amendments to recite the generally inwardly facing curvature of the drive cam structure and the generally outwardly facing curvature of the cam recess region do not create grounds for estoppel.

Double Patenting Rejections

In response to the double patenting rejections based on U.S. Patent No. 6,623,327 and U.S. Patent No. 6,547,632, Applicants submit herewith two terminal disclaimers in compliance with 37 C.F.R. § 1.321(c). Applicants respectfully request withdrawal of the double patenting rejections of the claims.

Applicants believe that this application is now in condition for allowance. Accordingly, Applicants respectfully request that the Examiner issue a Notice of Allowability covering the pending claims. If the Examiner has any questions, or if a telephonic interview would in any way advance prosecution of the application, please contact the undersigned attorney.

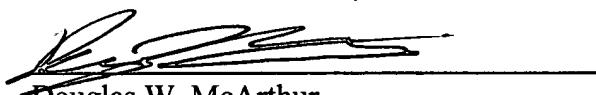
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Respectfully submitted,

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